WHAT IS CLAIMED IS:

1. A method for detecting airflow reversal in a sump system of a gas turbine engine, said method comprising:

positioning a first pressure sensor at a sump vent to sense a discharge flow pressure from a sump within the sump system;

positioning a second pressure sensor in the sump to sense a pressure in the sump;

comparing the sensed pressures obtained from the first and second pressure sensors to determine a pressure difference; and

comparing the pressure difference to a predetermined maximum allowable pressure difference.

2. A method in accordance with Claim 1 wherein positioning a second pressure sensor in the sump comprises positioning a second pressure sensor in an oil-wetted environment.

3. A method in accordance with Claim 1 wherein positioning a second pressure sensor in the sump further comprises sensing the pressure in a pressure line.

4. A method in accordance with Claim 3 wherein sensing the pressure through a pressure line further comprises purging the pressure line with air prior to sensing the pressure.

5. A method in accordance with Claim 1 wherein positioning a second pressure sensor in the sump comprises positioning a second pressure sensor at a second sump vent.

6. A method in accordance with Claim 1 wherein comparing the sensed pressures comprises:

transmitting a pressure signal from each of the first and second pressure sensors to an engine monitoring system;

determining a pressure difference in the monitoring system; and

displaying the pressure difference.

7. An apparatus for detecting sump airflow reversal in a vented sump in a gas turbine engine, said apparatus comprising:

a first pressure sensor coupled in flow communication with a sump vent for sensing a sump pressure at said sump vent, said first pressure sensor configured to produce a first signal indicative of the sensed pressure;

a second pressure sensor within said sump for sensing a sump pressure within said sump, said second pressure sensor configured to produce a second signal indicative of the sensed pressure; and

an output device coupled to said first and second pressure sensors, said output device configured to receive and display pressure indications based on the first and second signals.

8. An apparatus in accordance with Claim 7 wherein said second pressure sensor is disposed in an oil-wetted environment.

9. An apparatus in accordance with Claim 7 wherein said sump comprises a second sump vent, said second pressure sensor coupled in flow communication with said second sump vent for sensing a sump pressure therethrough.

10. An apparatus in accordance with Claim 9 wherein said second sump vent defines a drain path for said sump.

11. An apparatus in accordance with Claim 7 wherein said output device is further configured to:

determine a pressure difference between the first and second pressure signals; and

display an indication of the pressure difference.

12. An apparatus in accordance with Claim 11 wherein said output device is further configured to compare the pressure difference to a predetermined maximum allowable pressure difference.

13. A gas turbine engine comprising:

a compressor;

a turbine;

a shaft assembly coupling said compressor and said turbine ;

a support assembly rotatably supporting said shaft assembly;

a sump system for collecting oil from said support assembly, said sump system comprising a detection system for detecting operating pressures in said sump system; and

an engine monitoring system coupled to said detection system for detecting air flow reversal in said sump system.

14. An engine in accordance with Claim 13 wherein said detection system comprises:

a first pressure sensor coupled in flow communication with a sump vent for sensing a sump pressure at said sump vent, said first pressure sensor configured to produce a first signal indicative of the sensed pressure;

a second pressure sensor within said sump for sensing a sump pressure within said sump, said second pressure sensor configured to produce a second signal indicative of the sensed pressure; and

said monitoring system is configured to receive the first and second signals from said first and second pressure sensors.

15. An engine in accordance with Claim 14 wherein said monitoring system is further configured to determine a pressure difference based on the first and second signals.

16. An engine in accordance with Claim 14 wherein said second pressure sensor is positioned in an oil-wetted environment.

17. An engine in accordance with Claim 14 wherein said sump includes a second vent, said second pressure sensor in flow communication with said second vent for sensing a sump pressure therethrough.

18. An engine in accordance with Claim 14 wherein said second vent defines a drain path for said sump.